UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,820	11/21/2003	Feng-Wei Chen Russell	RSW920030184US1	3330

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EXAMINER
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ART UNIT	PAPER NUMBER
2163	

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/719,820	RUSSELL ET AL.
	Examiner	Art Unit	
	Helene Rose	2163	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>8/8/2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-22</u> is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-22</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>21 November 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All b)☐ Some * c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date <u>November 21, 2003</u>.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Detailed Action

1.   Claims 1-22 are pending; Claims 1, 10, 12, 15, 19, and 21 have been amended; No new

claims were added, or cancelled.

2.   Applicant's arguments filed on 8/8/2006 with respect to claims 1-22 have been

considered but are moot in view of the new ground(s) of rejection.

Information Disclosure Statement

3.   The information disclosure statement filed 11/21/2003 is objected because "JP

10065159" and "903873" does not indicate on the Information Disclosure Statement form "what

is to be considered", whether it's the abstract or full text document, wherein this should be

cited within column 4 of the IDS. In this case, the Examiner has __objected__ to these two foreign

documents because it fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of

each cited foreign patent document; each non-patent literature publication or that portion

which caused it to be listed; and all other information or that portion which caused it to be

listed.

In reference to the US Patents and the Non-Patent Literature cited on the Information

Disclosure Statement, Examiner is considering documents as well as the Foreign Patent

document "GB 2227106A" because it provides a full translation of the abstract and full text

document. It has been placed in the application file, but the information referred to therein has

not been considered.

Claim Objections

4.   In view of the Claims 11 and 20 being objected to because claims 11 and 20 having

parentheses within claims. Examiner withdraws the pending objection.

Claim Rejections - 35 U.S.C - 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section
122(b), by another filed in the United States before the invention by the applicant for
patent or (2) a patent granted on an application for patent by another filed in the United
States before the invention by the applicant for patent, except that an international
application filed under the treaty defined in section 351(a) shall have the effects for
purposes of this subsection of an application filed in the United States only if the
international application designated the United States and was published under Article
21(2) of such treaty in the English language.

6.   Claims 1–22 are rejected under 35 U.S.C. 102(e) as being anticipated by Vishnubhotla

(US Patent No. 6,799,181, Filing Date: June 20, 2003).

The applied reference has a common assignee with the instant application. Based upon

the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C.

102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37

CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the

inventor of this application and is thus not the invention "by another," or by an appropriate

showing under 37 CFR 1.131.

Claim 1:

Regarding Claim 1, Vishnubhotla teaches a computerized method of generating a data

mining tool, the method comprising:

obtaining objectives for the data-mining model (column 15, lines 19-25, wherein the

verification phase to determine whether the desire accuracy and error limit objectives for the

model under development have been met, and when these goals are met, the training process

proceeds, Vishnubhotla);

automatically selecting a set of algorithms based on objectives for the data-mining

model (column 4, lines 13-15, wherein selects data minding algorithms useful for solving the

identified problems; column 8, lines 20-22, wherein encoding of mining model training results

using one or more mathematical concepts such as rules, Vishnubhotla);

obtaining sample data (column 1, lines 39-43, Vishnubhotla);

creating a plurality of datasets from sample data (column 10, lines 13-17, wherein

create data schema or record structures, Vishnubhotla);

optimizing the set of algorithms using the plurality of datasets (Figure 3, wherein

column 14, lines 61-63, wherein the input data parameters include input data, i.e. diagram 306

and optimize miming run for, i.e. diagram 308, Vishnubhotla); and

generating the data mining model based on the optimized set of

algorithms (Figure 3, wherein column 14, lines 61-63, wherein the input data parameters

include input data, i.e. diagram 306 and optimize miming run for, i.e. diagram 308,

Vishnubhotla), wherein the data mining model mines data when executed (column 23, lines 38–

47, wherein Idmmbruns when so executed causes the data mining tools to find the mining base

name commerce_mb, the data mining model named "Shopper scoring setting" and execute the

found data mining scoring data through the trained model, wherein the data mining model

itself identifies the data store containing the populated data schema having the production data

for use in production training, wherein the data mining model itself contains the defining

parameters, Vishnubhotla).

Claims 2 and 22:

Regarding claims 2 and 22, Vishnubhotla teaches wherein the program code for

generating the plurality of datasets includes:

program code for shuffling the sample data (column 20, lines 65–67, wherein the data

mining model parameters are adjusted until the most accurate prediction is produced,

Vishunubhotla);

program code for placing the shuffled sample data into a plurality of partitions (Figure

4, diagram 400, Vishnubhotla); and

program code for including each partition in one of the plurality of datasets (Figure 4,

diagram 400, Visnubhotla).

Claim 3:

Regarding claim 3, Vishnubhotla teaches wherein the plurality of datasets includes a

training dataset, a validation dataset, and a testing dataset (column 12, lines 18–26,wherein

training and testing for the purpose of identifying data mining model; column 15, lines 17-19,

wherein verification phase is equivalent to validation, Vishnubhotla).

Claim 4:

Regarding claim 4, Vishnubhotla teaches wherein the creating step further includes

repeating the including step until each partition is included in at least one training dataset

(column 21, lines 24-28, wherein repeating production training tunes the installed data mining

model for best performance with a particular end user's actual production data as the nature of

the production data changes over time, Vishnubhotla).

Claim 5:

Regarding claim 5, Vishnubhotla teaches wherein the selecting step includes obtaining a

rule that comprises a best practice for an objective (column 13, lines 46-48, wherein the radial

basis function algorithm is a data mining algorithm practically designed for value prediction as

such as opposed to data classification or pattern matching, Vishnubhotla).

Claim 6:

Regarding claim 6, Vishnubhotla teaches wherein the best practice is based on at least

one of: research, data characteristics, and user feedback (column 13, lines 58-67,

Vishnubhotla).

Claim 7:

Regarding claim 7, Vishnubhotla teaches wherein the selecting step includes analyzing

an attribute of the sample data, and wherein the set of algorithms is further selected based on

the attribute (column 2, lines 1-5, wherein historical data, or samples of historical data are

analyzed and finding are output back to the production system to help improve operation;

column 4, lines 13-15, wherein selects data minding algorithms useful for solving the identified

problems; column 8, lines 20-22, wherein encoding of mining model training results using one

or more mathematical concepts such as rules, Vishnubhotla).

Claim 8:

Regarding claim 8, Vishnubhotla teaches wherein the optimizing step includes:

applying the set of algorithms to the plurality of datasets (column 3, lines 37-39,

wherein applying the trained data mining model by executing the data mining algorithm in

production scoring mode, wherein the data mining algorithm executed in production scoring

mode comprises a software process with the analytic application, wherein executing the data

mining algorithm typically has an output comprising production scored data, Vishnubhotla);

and

analyzing a set of results for the applying step (column 2, lines 1-5, wherein historical

data, or samples of historical data are analyzed and finding are output back to the production

system to help improve operation, Vishnubhotla).

Claim 9:

Regarding claim 9, Vishnubhotla teaches wherein the optimizing step further includes:

adjusting at least one algorithm based on the set of results (column 20, lines 60-67,

wherein data mining model parameters are adjusted, Vishnubhotla); and

applying the adjusted set of algorithms to the plurality of datasets (column 20, lines 60-

67, wherein data mining model parameters are adjusted until the most accurate prediction is

produced, Vishnubhotla).

Claims 10 and 21:

Regarding claims 10 and 21, Vishnubhotla teaches wherein the program code for

generating the data mining model includes program code for translating the optimized set of

algorithms into a set of standard query language (SQL) statements, and including the set of SQL

statements in the data mining model (column 10, lines 13-14 and lines 26-35, wherein create

table shopper is an SQL statement; column 18, line 44, wherein create table mining shopper is

a SQL statement, Vishnubhotla).

Claims 11 and 20:

Regarding claims 11 and 20, Vishnubhotla teaches program code for storing the

data mining model as a character large object (CLOB) in a database (column 2, lines 5-7,

wherein the quantities of data to be analyzed are large; column 17, lines 48-55, wherein new

input data comprising typically large quantities of end user production data; column 15, lines

26-40, wherein maximum numbers, which is equivalent to CLOB, which is defined to be a term

for a large file of characters stored as part of a database record, Vishnubhotla).

Claim 12:

Regarding claim 12, Vishnubhotla teaches a computerized method of generating a data

mining model, the method comprising:

obtaining a set of algorithms and a plurality of datasets (Figure 1, diagram 108, wherein

decide on mining algorithm and wherein column 7, lines 32-33, identifies a mining algorithm

useful in solving the at least one identified business problem; column 1, lines 59-67; column 8,

lines 15-24; column 14, lines 28-41, Vishnubhotla);

applying the set of algorithms to the plurality of datasets (column 3, lines 37-39,

wherein applying the trained data mining model by executing the data mining algorithm in

production scoring mode, wherein the data mining algorithm executed in production scoring

mode comprises a software process with the analytic application, wherein executing the data

mining algorithm typically has an output comprising production scored data, Vishnubhotla);

analyzing a set of results for the applying step (column 2, lines 1-5, wherein historical

data, or samples of historical data are analyzed and finding are output back to the production

system to help improve operation, Vishnubhotla);

adjusting at least one algorithm based on the set of results (column 20, lines 60-67,

wherein data mining model parameters are adjusted, Vishnubhotla);

applying the adjusted set of algorithms to the plurality of datasets (column 20, lines 60-

67, wherein data mining model parameters are adjusted until the most accurate prediction is

produced, Vishnubhotla); and

generating the data-mining model based on the adjusted set of algorithms, wherein the

data-mining model includes a set of SQL statements (column 10, lines 13-14 and lines 26-35,

wherein create table shopper is an SQL statement; column 18, line 44, wherein create table

mining shopper is a SQL statement, Vishnubhotla).

Claim 13:

Regarding claim 13, Vishnubhotla teaches wherein the obtaining step includes:

obtaining sample data (column 2, lines 1-3, wherein analytic applications typically function in a

general cycle in which historical data is collected, wherein samples of historical data are

analyzed and findings are output back, Vishnubhotla); and

automatically generating the plurality of datasets from the sample data (see abstract,

wherein automated data mining using domain-specific analytic applications for solving

predefined problems, Vishnubhotla).

Claim 14:

Regarding claim 14, Vishnubhotla teaches wherein the obtaining step includes:

obtaining objectives for the data mining model (column 6, lines 12-24,wherein a useful key to

simplifying the use of data mining in analytic applications is to make the analytic application

domain-specific, and wherein domain" refers to a problem subject area, and "domain-specific"

means that an analytic application is designed to operate on the basis of data related to a

particular problem subject area, where the data has specific defined data elements with defined

relations among the data elements, wherein for example, e-commerce is a specific domain, and

a domain-specific analytic application for e-commerce would accept and analyze only e-

commerce data and wherein for illustration purposes in this specification, e-commerce is

chosen as the domain of interest, Vishnubhotla); and

automatically selecting the set of algorithms based on the objectives (Figure 1, all

features, illustrates automatic data mining; column 4, lines 13-15, wherein selects data

minding algorithms useful for solving the identified problems; column 8, lines 20-22, wherein

encoding of mining model training results using one or more mathematical concepts such as

rules, Vishnubhotla).

Claim 15:

Regarding claim 15, Vishnubhotla in view of Campos teaches a system for generating a

data mining model, the system comprising:

a dataset system for obtaining a plurality of datasets (Figure 4, all features illustrates a

plurality of datasets, wherein datasets are defined to be a result of data, Vishnubhotla);

a rules system for obtaining a plurality of algorithms (Refer to claim 12, wherein this

limitation has already been addressed, Vishnubhotla)

an optimization system for optimizing the set of algorithms using the plurality of

datasets (Figure 3, wherein column 14, lines 61-63, wherein the input data parameters include

input data, i.e. diagram 306 and optimize miming run for, i.e. diagram 308, Vishnubhotla); and

a model system for generating the data-mining model based on the optimized set of

algorithms, wherein the data-mining model includes a set of SQL statements (column 10, lines

13-14 and lines 26-35, wherein create table shopper is an SQL statement; column 18, line 44,

wherein create table mining shopper is a SQL statement, Vishnubhotla).

Claim 16:

Regarding claim 16, Vishnubhotla teaches a storage system for storing the data-mining

model in a database (column 6, lines 9-11, wherein data stores or databases comprised of data

files which in turn comprised of records which in turn are comprised of data elements or fields,

Vishnubhotla).

Claim 17:

Regarding claim 17, Vishnubhotla teaches wherein the dataset system automatically

generates the plurality of datasets from sample data (see abstract, wherein automated mining

using domain-specific analytic applications for solving predefined problems, including

populating input data schema, the input schema, the input schema having a format appropriate

to solution of a predefined problem, Vishnubhotla)

Claim 18:

Regarding claim 18, Vishnubhotla teaches wherein the rules system automatically

selects the set of algorithms based on objectives for the data-mining model (column 4, lines

13-15, wherein selects data minding algorithms useful for solving the identified problems;

column 8, lines 20-22, wherein encoding of mining model training results using one or more

mathematical concepts such as rules, Vishnubhotla).

Claim 19:

Regarding claim 19, Vishnubhotla teaches a program product stored on a recordable

medium for generating a data mining model, which when executed comprises:

program code for generating a plurality of datasets from sample data (column 17, lines

65-67, wherein any software application capable of beginning execution of a computer

program in accordance with a stored, predefined schedule; column 18, lines 20-25, wherein

scripts operating at the level of an operating system and compiled programs capable of calling

API functions in APIs associated with particular database management systems; column 21,

lines 43-48, wherein data mining tools typically provide program application programming

interfaces; column 17, lines 59-60, wherein method includes populating data schema with

sample historical data; column 22, lines 6-9, wherein the data mining definition itself identifies

the data store containing the populated data schema having the sample historical data for use

in production training, Vishnubhotla);

program code for selecting a set of algorithms based on objectives for the data-mining

model (column 4, lines 13-15, wherein selects data minding algorithms useful for solving the

identified problems; column 8, lines 20-22, wherein encoding of mining model training results

using one or more mathematical concepts such as rules, Vishnubhotla);

program code for optimizing the set of algorithms using the plurality of datasets (Figure

3, wherein column 14, lines 61-63, wherein the input data parameters include input data, i.e.

diagram 306 and optimize miming run for, i.e. diagram 308, Vishnubhotla); and

program code for generating the data-mining model based on the optimized set of

algorithms (Figure 3, wherein column 14, lines 61-63, wherein the input data parameters

include input data, i.e. diagram 306 and optimize miming run for, i.e. diagram 308,

Vishnubhotla), wherein the data mining model mines data when executed (column 23, lines 38-

47, wherein Idmmbruns when so executed causes the data mining tools to find the mining base

name commerce_mb, the data mining model named "Shopper scoring setting" and execute the

found data mining scoring data through the trained model, wherein the data mining model

itself identifies the data store containing the populated data schema having the production data

for use in production training, wherein the data mining model itself contains the defining

parameters, Vishnubhotla).

Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Vishnubhotla	(US Patent No. 6,799,181)
2. Campos	(US Patent No. 7,092,941)
3. Miller et al.	(US Patent No. 6,687,695)
4. Miller et al	(US Patent No. 6,553,366)
5. Tate	(US Patent No. 6,704,717)
6. Tate et al.	(US Patent No. 6,611,829)

Point of Contact

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Helene Rose whose telephone number is (571) 272-0749. The

examiner can normally be reached on 8:00am – 4:30pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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October 12, 2006

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